Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V RENEWAL (PROPOSED/FINAL PERMIT) NO. V-08-020
SOUTHWIRE COMPANY
HAWESVILLE, KY
JANUARY 16, 2009

SOURCE I.D. #:	021-091-00009
SOURCE A.I. #:	44199
ACTIVITY #:	APE20040001

SOURCE DESCRIPTION:
Southwire Company is a secondary aluminum production plant. The primary activity at the plant is to process molten aluminum, aluminum billets, sows, and ingots into finished specialty rod and cable products. There are three (3) aluminum rod mills, one (1) cable mill and four (4) strip mills. Rod mill #1 consists of two (2) melting furnaces and two (2) holding furnaces. Rod mill #2 consists of one (1) melting furnace and two (2) holding furnaces. Rod mill #3 consists of two (2) melt/hold furnaces (dual purpose furnaces). The melting and holding furnaces are utilized to melt and hold aluminum, for further processing aluminum into rod or cable products. There are Four (4) strip mills and three (3) associated strip mill annealing ovens. In addition to the strip mill annealing ovens, Four (4) larger annealing ovens are used to heat treat the aluminum as necessary. Aluminum rod is used by Southwire and other customers to produce a variety of products, including electrical power cable, insect screening, welding wire, and nails. Electrical power cable is utilized in different applications to distribute electricity from the generating source to the end user.

The Southwire Company plant is located adjacent to Century Aluminum of Kentucky LLC, source I.D. # 21-091-00004. The Century Aluminum plant is a primary aluminum reduction source that produces aluminum billets, ingots, and sows for further consumer use, and also supplies molten aluminum in crucibles to Southwire Company. Both plants are considered by the Kentucky Division for Air Quality and the US EPA Region 4 to be one source as defined in 401 KAR 51:017, Prevention of Significant Deterioration (PSD) of air quality. Each source is subject to 401 KAR 52:020 and will be issued individual Title V operating permits. Pursuant to the respective Title V permits, each permittee is responsible and liable for their own violations unless there is a joint cause for the violations.

Pursuant to 40 CFR Part 63, Subpart RRR, the reverberatory melt furnaces on rod mill #1 (melt furnaces S1 and S2), and the two (2) melt/hold furnaces on rod mill #3 (furnaces S8 and S9) meet the definition of a group 1 furnace. The Two (2) holding furnaces on rod mill #1 (furnaces S4 and S5), one (1) melt furnace on rod mill #2 (furnace S3), and Two (2) holding furnaces on rod mill #2 (furnaces S6 and S7) are group 2 furnaces. The three (3) in-line degassing units meet the definition of an in-line fluxer. Therefore, these units are subject to the requirements of 40 CFR Part 63, Subpart RRR. As such, the applicable final rule requirements of 40 CFR Part 63, Subpart RRR, promulgated on December 30, 2002, are incorporated into this renewal.

The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of any single HAP is equal to or greater than ten (10) tons per year and the combination of HAPs is equal to or greater than twenty-five (25) tons per year. The potential to emit (as defined in 401 KAR 52:001, Section 1

(56)) of particulate matter and SO_2 is greater than one hundred (100) tons per year. Therefore, the source is a major source and is subject to the provisions of 401 KAR 52:020.

This permit is the renewed issuance of the source's plant-wide Title V operating permit.

COMMENTS:

1) Emission Units: Melt Furnace #1 (S1) with an annual average process rate of 12.8 tons of aluminum per hour and a maximum rated capacity of 25 MMBtu/hr, Melt Furnace #2 (S2) with an annual average process rate of 12.8 tons of aluminum per hour and a maximum rated capacity of 25 MMBtu/hr, Holding Furnace #1 (S4) with an annual average process rate of 8.1 tons of aluminum per hour and a maximum rated capacity of 10 MMBtu/hr, and Holding Furnace #2 (S5) with an annual average process rate of 8.1 tons of aluminum per hour and a maximum rated capacity of 7 MMBtu/hr.

   a) Potential to Emit Calculations

      i. AP-42, Chapter 1.4, Tables 1.4-1, 2 and 3 were used to determine the natural gas combustion emissions from furnaces S1, S2, S4 and S5. AP-42, Chapter 1.3, Tables 1.3-1, 2 and 3 were used to determine the #2 fuel combustion emissions from furnaces S1, S2, S4 and S5. AP-42, Chapter 1.5, Table 1.5-1 was used to determine the propane combustion emissions from furnaces S1, S2, S4 and S5.

      ii. The emission limit of 0.4 lb of PM/ton of metal processed was used to calculate particulate emissions limits for the furnaces S1 and S2 (group 1 furnaces processing other than clean charge). This emission limit is the federally enforceable limitation allowed by 40 CFR Part 63.1505 (i)(1) for group 1 furnaces processing other than clean charge.

      iii. The emissions for HF and chlorine from the furnaces S1 and S2 were calculated using the percent of fluorine and chlorine contents in the flux. Using a maximum of 10% fluorine present in the flux and of that 10% fluorine present, assuming that 18% is emitted (this was condition No. 29 in Permit No. S-94-039), the HF emissions were calculated. The methodology to calculate HF emissions is consistent with that approved by DAQ during initial Title V permit review. For chlorine emissions, using a maximum of 20% chlorine in the flux and of that 20% chlorine present, assuming that 50% is emitted, the chlorine emissions were calculated. The methodology to calculate chlorine emissions is consistent with that approved by DAQ during initial Title V permit review.

   b) Applicable Regulations

      401 KAR 61:020, Existing process operations

      40 CFR 63, Subpart RRR: National Emission Standards for Hazardous Air Pollutant Emissions for Secondary Aluminum Production

      i. Furnaces S1, S2, S4 and S5 were installed before July 2, 1975; therefore, the requirements of 401 KAR 61:020, existing process operations, apply to the furnaces. Pursuant to 401 KAR 61:020, particulate emissions from furnaces S1, S2, S4 and S5 shall not

exceed 15.7 lb/hr, 15.7 lb/hr, 16.65 lb/hr, and 16.65 lb/hr, respectively. However, these allowables are superceded by the allowables in 40 CFR Part 63, Subpart RRR for furnaces S1, and S2. In addition the visible emissions from each furnace shall not be greater than 40% opacity.

ii. The four (4) furnaces identified as S1, S2, S4 and S5 are subject to the National Emission Standards for Hazardous Air Pollutants, 401 KAR 63:002, Section 3 (eee) (40 CFR 63, Subpart RRR). The detailed requirements of this rule are incorporated into the permit. Following is a summary of the requirements:

A) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 401 KAR 63:002 Section 3 (a), apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

B) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.

C) For furnaces S1 and S2, maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

D) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan. The OM&M plan was initially submitted to KDAQ on September 20, 2002. The permittee shall be in compliance with the most recently revised and KDAQ approved plan. Those OM&M plan requirements pertaining specifically to the equipment at this source are incorporated into the permit.

E) Operate each furnace (S1 and S2) subject to the emission standards in §63.1505(i)(1).

F) The PM emissions from each of the two (2) melting furnaces (S1 and S2) shall not exceed 0.4 pounds per ton of feed.

G) The HCl emissions from each of the two (2) melting furnaces (S1 and S2) shall not exceed 0.40 pounds per ton of feed.

H) The D/F emissions from each of the two (2) melting furnaces (S1 and S2) shall not exceed 2.1×10^{-4} grams per ton of feed.

I) If the PM, D/F, and HCl emission limits above are not met for each individual emission unit, the permittee shall comply with the respective emission limits calculated for a secondary aluminum processing unit (SAPU).

c) Non-Applicable Regulations

40 CFR Part 64, Compliance Assurance Monitoring
401 KAR 61:035, Existing process gas streams

i. The requirements of 40 CFR Part 64, “Compliance Assurance Monitoring” are not applicable to the furnaces S1, S2, S4 and S5.

Pursuant to 40 CFR 64.2(b)(1)(i), the requirement of this rule do not apply to a source subject to emission limits or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 (NSPS) or 112 (NESHAP) of the Act. The furnaces are subject to section 112 (40 CFR 63, Subpart RRR) for particulate and HAP emissions, and they do not meet the rule applicability criteria for other emitted pollutants. Therefore, these units are not subject to this rule.

ii. The provisions of 401 KAR 61:035, Existing Process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 61 with respect to sulfur dioxide and carbon monoxide are applicable to the affected facility.

A) The provisions of 401 KAR 61:035 with respect to sulfur dioxide are applicable if a source is located in a county classified as Class 1 or VA as defined in 401 KAR 50:025. The Southwire source is located in Hancock County, which is neither a Class 1 nor VA county pursuant to 401 KAR 50:025. Therefore, the requirements of 401 KAR 61:035 do not apply to the furnaces with respect to sulfur dioxide.

B) The provisions of 401 KAR 61:035 with respect to carbon monoxide are applicable if the affected facility has the potential to emit more than 1,000 tons per year of carbon monoxide generated during the operation of any grey iron cupola, blast furnace, basic oxygen steel furnace, coal conversion plants, catalyst regeneration of a petroleum cracking system, or other petroleum process and is located in an area classified as nonattainment for carbon monoxide in 401 KAR 51:010. The Southwire source has the potential to emit less than 1,000 tons per year and is located in an attainment area as classified is 401 KAR 51:010. Therefore, the requirements of 401 KAR 61:035 do not apply to the furnaces with respect to carbon monoxide.

d) Control Device: None

2) Emission Units: Melt Furnace #3 (S3) with an annual average process rate of 13.7 tons of aluminum per hour and a maximum rated capacity of 25 MMBtu/hr.

a) Potential to Emit Calculations

i. AP-42, Chapter 1.4, Tables 1.4-1, 2 and 3 were used to determine the natural gas combustion emissions from furnace S3. AP-42, Chapter 1.3, Tables 1.3-1, 2 and 3 were used to determine the #2 fuel combustion emissions from furnace S3. AP-42, Chapter 1.5, Table 1.5-1 was used to determine the propane combustion emissions from furnace S3.

ii. The emission factor of 0.8 lb of PM/ton of metal processed was used to calculate the potential particulate emissions for the furnace S3 (group 2 furnace).

b) Applicable Regulations

401 KAR 59:010, New process operations
401 KAR 59:105, New process gas streams with respect to sulfur dioxide
Self-imposed limitations to preclude PSD
40 CFR 63, Subpart RRR: National Emission Standards for Hazardous Air Pollutant Emissions for Secondary Aluminum Production

i. Melt furnace S3 was installed after July 2, 1975; therefore, the requirements of 401 KAR 59:010, new process operations, apply to the furnace. Pursuant to 401 KAR 59:010, particulate emissions from melt furnace S3 shall not exceed the lesser of the formula amount based on process weight rate or 5.6 lb/hr (See iii. below). In addition the visible emissions from melt furnace S3 shall not be greater than 20% opacity.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to sulfur dioxide are applicable to the affected facility. This source has the potential to emit of sulfur dioxide greater than 100 tons per year. Therefore, pursuant to 401 KAR 59:105, the sulfur dioxide (SO_2) in the process gas stream from melt furnace S3 shall not exceed 28.63 grains per 100 dscf at zero percent oxygen.

iii. Self-imposed limitations for melt furnace S3 to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration (PSD):

A) Fuel oil usage rate shall not exceed 65,000 gallons/month and the sulfur in the fuel oil shall not exceed 0.7% sulfur (by weight).
B) Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours or the minimum time specified, shall not exceed 5.6 lbs/hr.
C) Hourly PM_{10} emissions, as measured by Reference Method 201 or 201a, Appendix M, 40 CFR 51, and averaged over three hours or the minimum specified time, shall not exceed 3.4 lbs/hr.
D) Sulfur dioxide emissions, as measured by Reference Method 6 or 6c, Appendix A, 40 CFR 60, and averaged over three hours, shall not exceed 3.25 tons/month.

iv. Melt furnace S3 is subject to the National Emission Standards for Hazardous Air Pollutants, 401 KAR 63:002, Section 3 (eee) (40 CFR 63, Subpart RRR). The detailed requirements of this rule are incorporated into the permit. Following is a summary of the requirements:

A) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 401 KAR 63:002 Section 3 (a), apply to the facilities described in this section except when otherwise specified in 40 CFR 63, Subpart RRR.
B) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.
C) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M

plan and within the parameter values or ranges established in the OM&M plan. The OM&M plan was initially submitted to KDAQ on September 20, 2002. The permittee shall be in compliance with the most recently revised and KDAQ approved plan. Those OM&M plan requirements pertaining specifically to the equipment at this source are incorporated into the permit.

c) Non-Applicable Regulations
40 CFR Part 64, Compliance Assurance Monitoring
401 KAR 59:105, New process gas streams with respect to carbon monoxide

i. The requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" are not applicable to the melt furnace S3. Pursuant to 40 CFR 64.2(b)(1)(i), the requirement of this rule do not apply to a source subject to emission limits or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 (NSPS) or 112 (NESHAP) of the Act. The furnace is subject to section 112 (40 CFR 63, Subpart RRR) for particulate and HAP emissions, and it does not meet the rule applicability criteria for other emitted pollutants. Therefore this unit is not subject to this rule.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to carbon monoxide is applicable to an affected facility. The provisions of 401 KAR 59:105 with respect to carbon monoxide are applicable if the affected facility has the potential to emit more than 1,000 tons per year of carbon monoxide and is located in an area classified as nonattainment for carbon monoxide in 401 KAR 51:010. The Southwire source has the potential to emit of carbon monoxide less than 1,000 tons per year and is located in an attainment area as classified is 401 KAR 51:010. Therefore, the requirements of 401 KAR 59:105 do not apply to melt furnace S3 with respect to carbon monoxide.

d) Control Device: None

3) Emission Units: Holding Furnace #3 (S6) with maximum rated capacity of 10.5 MMBtu/hr, and Holding Furnace #4 (S7) with maximum rated capacity of 10.5 MMBtu/hr, with the combined annual average process rate of 13.7 tons of aluminum per hour.

a) Potential to Emit Calculations

i. AP-42, Chapter 1.4, Tables 1.4-1, 2 and 3 were used to determine the natural gas combustion emissions from furnaces S6 and S7. AP-42, Chapter 1.3, Tables 1.3-1, 2 and 3 were used to determine the #2 fuel combustion emissions from furnaces S6 and S7. AP-42, Chapter 1.5, Table 1.5-1 was used to determine the propane combustion emissions from furnaces S6 and S7.

ii. The emission factor of 0.8 lb of PM/ton of metal processed was used to calculate the potential particulate emissions for the furnaces S6 and S7.

b) Applicable Regulations

401 KAR 59:010, New process operations
401 KAR 59:105, New process gas streams with respect to sulfur dioxide
Self-imposed limitations to preclude PSD
40 CFR 63, Subpart RRR: National Emission Standards for Hazardous Air Pollutant Emissions for Secondary Aluminum Production

i. The two (2) holding furnaces S6 and S7 were installed after July 2, 1975, therefore the requirements of 401 KAR 59:010, new process operations, apply to the furnaces. Pursuant to 401 KAR 59:010, particulate emissions from the two (2) holding furnaces S6 and S7 shall not exceed the lesser of the formula amount based on process weight rate or a combined 5.6 lb/hr (See iii. below). In addition the visible emissions from the two (2) holding furnaces S6 and S7 shall not be greater than 20% opacity.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to sulfur dioxide is applicable to the affected facility. The Southwire source has the potential to emit of sulfur dioxide greater than 100 tons per year. Therefore, pursuant to 401 KAR 59:105, the sulfur dioxide (SO_2) in the process gas streams from the two (2) holding furnaces S6 and S7 each shall not exceed 28.63 grains per 100 dscf at zero percent oxygen.

iii. Self-imposed limitations for the two (2) holding furnaces S6, S7 to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration (PSD):

A) Fuel oil usage rate shall not exceed 65,000 gallons/month and the sulfur in the fuel oil shall not exceed 0.7% sulfur (by weight).
B) Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours or the minimum time specified, shall not exceed combined particulate emission rate of 5.6 lbs/hr.
C) Hourly PM10 emissions, as measured by Reference Method 201 or 201a, Appendix M, 40 CFR 51, and averaged over three hours or the minimum specified time, shall not exceed 3.4 lbs/hr.
D) Sulfur dioxide emissions, as measured by Reference Method 6 or 6c, Appendix A, 40 CFR 60, and averaged over three hours, shall not exceed 3.25 tons/month.

iv. The two (2) holding furnaces S6 and S7 are subject to the National Emission Standards for Hazardous Air Pollutants, 401 KAR 63:002 Section 3 (eee) (40 CFR 63, Subpart RRR). The detailed requirements of this rule are incorporated into the permit. Following is a summary of the requirements:

A) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 401 KAR 63:002 Section3 (a), apply to

the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

B) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.

C) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan. The OM&M plan was initially submitted to KDAQ on September 20, 2002. The permittee shall be in compliance with the most recently revised and KDAQ approved plan. Those OM&M plan requirements pertaining specifically to the equipment at this source are incorporated into the permit.

c) Non-Applicable Regulations

40 CFR Part 64, Compliance Assurance Monitoring

401 KAR 59:105, New process gas streams with respect to carbon monoxide

i. The requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" are not applicable to the two (2) holding furnaces S6, S7. Pursuant to 40 CFR 64.2(b)(1)(i), the requirement of this rule do not apply to a source subject to emission limits or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 (NSPS) or 112 (NESHAP) of the Act. The furnaces are subject to section 112 (40 CFR 63, Subpart RRR) for particulate and HAP emissions, and they do not meet the rule applicability criteria for other emitted pollutants. Therefore these units are not subject to this rule.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to carbon monoxide is applicable to an affected facility. The provisions of 401 KAR 59:105 with respect to carbon monoxide are applicable if the affected facility has potential to emit more than 1,000 tons per year of carbon monoxide and is located in area classified as nonattainment for carbon monoxide in 401 KAR 51:010. The Southwire source has the potential to emit of carbon monoxide less than 1,000 tons per year and is located in an attainment area as classified is 401 KAR 51:010. Therefore, the requirements of 401 KAR 59:105 do not apply to the two (2) holding furnaces S6, S7 with respect to carbon monoxide.

d) Control Device: None

4) Emission Units: Two (2) Melt/Hold Furnaces (S8, S9) each with a maximum rated capacity of 18 MMBtu/hr and an annual average process rate of 2.75 tons of aluminum per hour.

a) Potential to Emit Calculations

i. AP-42, Chapter 1.4, Tables 1.4-1, 2 and 3 were used to determine the natural gas combustion emissions from furnaces S8 and S9. AP-42, Chapter 1.3, Tables 1.3-1, 2 and 3 were used to determine the #2 fuel combustion emissions from furnaces S8 and S9. AP-42, Chapter 1.5, Table 1.5-1 was used to determine the propane combustion emissions

from furnaces S8 and S9.

ii. The emission limit of 0.4 lb of PM/ton of metal processed was used to calculate particulate emissions limits for the furnaces S8 and S9 (group 1 furnaces processing other than clean charge). This emission limit is the federally enforceable limitation allowed by 40 CFR Part 63.1505 (i)(1) for these group 1 furnaces processing other than clean charge.

iii. The emissions for chlorine from the furnaces S8, and S9 were calculated using a maximum of 20% chlorine in the flux and of that 20 % chlorine present, assuming that 50% is emitted, the chlorine emissions were calculated. The methodology to calculate chlorine emissions is consistent with that approved by DAQ during initial Title V permit review.

b) Applicable Regulations

401 KAR 59:010, New process operations
401 KAR 59:105, New process gas streams with respect to sulfur dioxide
Self-imposed limitations to preclude PSD
Self-imposed state origin requirements
40 CFR 63 Subpart RRR: National Emission Standards for Hazardous Air Pollutant Emissions for Secondary Aluminum Production

i. The two (2) melt/hold furnaces S8, S9 were installed after July 2, 1975, therefore the requirements of 401 KAR 59:010, new process operations, apply to the furnaces. Pursuant to 401 KAR 59:010, particulate emissions from the two (2) melt/hold furnaces S8, S9 shall not exceed the lesser of the formula amount based on process weight rate or a combined 5.6 lb/hr (See iii. below). In addition the visible emissions from the two (2) melt/hold furnaces S8, S9 shall not be greater than 20% opacity.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to sulfur dioxide is applicable to an affected facility. The Southwire source has the potential to emit of sulfur dioxide greater than 100 tons per year. Therefore, pursuant to 401 KAR 59:105, the sulfur dioxide (SO_2) in the process gas streams from the two (2) melt/hold furnaces S8, S9 each shall not exceed 28.63 grains per 100 dscf at zero percent oxygen.

iii. Self-imposed limitations for the two (2) melt/hold furnaces S8, S9 to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration (PSD):

A) Fuel oil usage rate shall not exceed 65,000 gallons/month and the sulfur in the fuel oil shall not exceed 0.7% sulfur (by weight).
B) Hourly particulate emissions, as measured by Reference Method 5, Appendix A, 40 CFR 60, averaged over three hours or the

minimum time specified, shall not exceed combined particulate emission rate of 5.6 lbs/hr.

C) Hourly PM10 emissions, as measured by Reference Method 201 or 201a, Appendix M, 40 CFR 51, and averaged over three hours or the minimum specified time, shall not exceed 3.4 lbs/hr.

D) Sulfur dioxide emissions, as measured by Reference Method 6 or 6c, Appendix A, 40 CFR 60, and averaged over three hours, shall not exceed 3.25 tons/month.

iv. The two (2) melt/hold furnaces S8, S9 are subject to the National Emission Standards for Hazardous Air Pollutants, 401 KAR 63:002 Section 3 (eee) (40 CFR 63, Subpart RRR). The detailed requirements of this rule are incorporated into the permit. Following is a summary of the requirements:

A) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 401 KAR 63:002 Section3 (a), apply to the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

B) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.

C) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

D) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan. The OM&M plan was initially submitted to KDAQ on September 20, 2002. The permittee shall be in compliance with the most recently revised and KDAQ approved plan. Those OM&M plan requirements pertaining specifically to the equipment at this source are incorporated into the permit.

E) Operate each furnace subject to the emission standards in §63.1505(i)(1).

F) The PM emissions from each of the two (2) melt/hold furnaces (S8 and S9) shall not exceed 0.4 pounds per ton of feed.

G) The HCl emissions from each of the two (2) melt/hold furnaces (S8 and S9) shall not exceed 0.40 pounds per ton of feed.

H) The D/F emissions from each of the two (2) melting furnaces (S1 and S2) shall not exceed 2.1×10^{-4} grams per ton of feed.

I) If the PM, D/F and HCl emission limits above are not met for each individual emission unit, the permittee shall comply with the respective emission limits calculated for a secondary aluminum processing unit (SAPU).

c) Non-Applicable Regulations

40 CFR Part 64, Compliance Assurance Monitoring
401 KAR 59:105, New process gas streams with respect to carbon monoxide

i. The requirements of 40 CFR Part 64, “Compliance Assurance Monitoring” are not applicable to the two (2) melt/hold furnaces S8,

S9. Pursuant to 40 CFR 64.2(b)(1)(i), the requirement of this rule do not apply to a source subject to emission limits or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 (NSPS) or 112 (NESHAP) of the Act. The furnaces are subject to section 112 (40 CFR 63, Subpart RRR) for particulate and HAP emissions, and they do not meet the rule applicability criteria for other emitted pollutants. Therefore these units are not subject to this rule.

ii. The provisions of 401 KAR 59:105, New process gas streams, are applicable if no other standard of performance within 401 KAR Chapter 59 with respect to carbon monoxide is applicable to an affected facility. The provisions of 401 KAR 59:105 with respect to carbon monoxide are applicable if an affected facility has the potential to emit more than 1,000 tons per year of carbon monoxide and is located in an area classified as nonattainment for carbon monoxide in 401 KAR 51:010. The Southwire source has the potential to emit of carbon monoxide less than 1,000 tons per year and is located in an attainment area as classified is 401 KAR 51:010. Therefore, the requirements of 401 KAR 59:105 do not apply to the two (2) melt/hold furnaces S8, S9 with respect to carbon monoxide.

d) Control Device: None

5) Emission Units: Three (3) in-line degassing units respectively located at Rod Mill Nos. 1, 2 and 3 with a combined chlorine usage of 18,000 pounds per year.

a) Potential to Emit Calculations

Chlorine in combination with an inert gas is used in the degassing units to remove primarily hydrogen gas and impurities. The resultant HCl emissions were calculated using engineering estimates. The methodology to calculate process emissions is consistent with that approved by DAQ during initial Title V permit review.

b) Applicable Regulations

401 KAR 59:010, New process operations
40 CFR 63 Subpart RRR: National Emission Standards for Hazardous Air Pollutant Emissions for the Secondary Aluminum Production

i. The in-line degassing units were installed after July 2, 1975, therefore the requirements of 401 KAR 59:010, new process operations, apply to these process units. Pursuant to 401 KAR 59:010, particulate emissions from each of the three (3) in-line degassing units shall not exceed 5.21 lbs/hr. In addition the visible emissions from the three (3) In-line degassing units shall not be greater than 20 % opacity.

ii. The in-line degassing units are subject to the National Emission Standards for Hazardous Air Pollutants, 401 KAR 63:002 Section 3 (eee) (40 CFR 63, Subpart RRR). The detailed requirements of this rule are incorporated into the permit. Following is a summary of the requirements:

A) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 401 KAR 63:002 Section 3 (a), apply to

the facilities described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

B) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.

C) The PM emissions from each in-line fluxer (degasser unit) shall not exceed 0.01 pounds per ton of feed.

D) The HCl emissions from each of in-line fluxer (degasser unit) shall not exceed 0.04 pounds per ton of feed.

E) If the PM and HCl emission limits above are not met for each individual emission unit, the permittee shall comply with the respective emission limits calculated for a secondary aluminum processing unit (SAPU).

c) Non-Applicable Regulations

40 CFR Part 64, Compliance Assurance Monitoring

i. The requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" are not applicable to the three (3) in-line fluxers (degasser units). Pursuant to 40 CFR 64.2(b)(1)(i), the requirement of this rule do not apply to a source subject to emission limits or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 (NSPS) or 112 (NESHAP) of the Act. The three (3) inline-degassing units are subject to section 112 (40 CFR 63, Subpart RRR) for particulate and HAP emissions, and they do not meet the rule applicability criteria for other emitted pollutants. Therefore these units are not subject to this rule.

d) Control Device: None

6) Insignificant Activities

a) Applicable Regulations

i. Natural gas fired (with propane backup) Annealing Oven #1 (2.26 MMBtu/hr), and natural gas fired (with propane backup) Annealing Oven #2 (2.26 MMBtu/hr) [401KAR 61:020]

ii. Natural gas fired (with propane backup) Annealing Oven #3 (4 MMBtu/hr), natural gas fired (with propane backup) Annealing Oven #4 (6 MMBtu/hr), natural gas fired (with propane backup) POT heaters (1.65 MMBtu/hr), natural gas fired (with propane backup) Sow Dryer #1 (1.0 MMBtu/hr), natural gas fired (with propane backup) Sow Dryer #2 (3.621 MMBtu/hr), Aluminum dross press, dross storage, natural gas fired (with propane backup) Strip Mill Annealing Oven # 1 (0.5 MMBtu/hr), natural gas fired (with propane backup) Strip Mill Annealing Oven # 2, and natural gas fired (with propane backup) Strip Mill Annealing Oven # 3 (0.5 MMBtu/hr) [401 KAR 59:010]

iii. Parts washers, welding, 1 GPM lube oil fugitives, 30,000 gallon propane tanks [401 KAR 63:020]

iv. 1 GPM settling basin, approximately one (1) mile plant roads, cooling towers [401 KAR 63:010]

v. Enclosed aluminum dross press with filter [401 KAR 52:020]

vi. Five (5) drawing machines, each using 400 GPM drawing oil, and one (1) drawing machine using 675 GPM drawing oil [401 KAR 59:010]

b) Non Applicable Regulations

i. Pursuant to 40 CFR 63.460 (a), the requirements of 40 CFR 63, Subpart T, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning*, apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75–09–2), perchloroethylene (CAS No. 127–18–4), trichloroethylene (CAS No. 79–01–6), 1,1,1-trichloroethane (CAS No. 71–55–6), carbon tetrachloride (CAS No. 56–23–5) or chloroform (CAS No. 67–66–3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. The parts washers, as insignificant activities, do not use any of the solvents mentioned above in a total concentration greater than five (5) percent. Therefore, the parts washers are not subject to the requirements of 40 CFR 63, Subpart T.

ii. Pursuant to 40 CFR 63.400 (a), the requirements of 40 CFR 63, Subpart Q, National Emission *Standards for Hazardous Air Pollutants (NESHAP) for Industrial Process Cooling Towers*, apply to each cooling tower that is operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources. The cooling towers, as insignificant activities, do not use chromium-based water treatment chemicals. Therefore, the cooling towers are not subject to the requirements of 40 CFR 63, Subpart Q.

c) Control Device: Filter for the Aluminum dross press. No controls for other insignificant activities.

7) State Origin Requirements

These conditions are applicable to the entire source as follows:

a) Chlorine emissions shall not exceed 9.37 lbs per hour. Compliance is assumed as long as the NESHAP HCl limits are not exceeded and

b) Fluoride content in flux used in furnace S1 and S2 shall not exceed 10% (weight) of the flux.

Condition b above, which was Condition No. 29 in Permit No. S-94-039 issued on May 6, 1994, was inadvertently omitted from initial Title V permit V-98-008 and subsequent Revision 1. This notwithstanding, as an applicable requirement this Condition has been included in this Title V renewal. This Condition is applicable only to furnaces S1 and S2,

as the other furnaces (S3, S4, S5, S6, S7, S8 and S9) have a federally enforceable requirement to use fluoride free flux.

8) The following new emission units have been installed at the source during the prior five (5) year period and are incorporated into this Title V renewal permit:

a) Three (3) in-line degassers, one at each of Rod Mills #1, 2 and 3. These significant units replaced the existing sniff units in 1999, 2001 and 2003, respectively, and they have demonstrated compliance with the initial compliance requirements of 40 CFR 63, Subpart RRR during 2003.
b) One (1) Strip Mill Annealing Oven #1 (insignificant activity, installed in 2003).
c) One (1) Strip Mill Annealing Oven # 2 (insignificant activity, installed in 2004).
d) One (1) Strip Mill Annealing Oven # 3 (insignificant activity, installed in 2005).
e) One (1) Drawing Machine # 4 (insignificant activity, installed in 2004).
f) One (1) Drawing Machine # 5 (insignificant activity, installed in 2005).
g) One (1) Drawing Machine # 6 (insignificant activity, installed in 2007).
h) One (1) Annealing Oven # 4 (insignificant activity, installed in 2006).
i) One (1) Sow Dryer # 2 (insignificant activity, installed in 2006).

SOURCE STATUS:

(a) On December 4, 1998, U.S. EPA issued a memorandum clarifying that die casting sources meeting certain criteria are not considered as secondary metal production plants, which is one of the twenty eight (28) specifically listed source categories pursuant to 401 KAR 51:017, Section 1(25)(a)(1). Such sources would be a major stationary source only if they had the potential to emit a regulated pollutant at 250 tons per year or more. This 1998 memorandum notwithstanding, the Kentucky DAQ and U.S. EPA Region 4 determined during the preparation of the initial Title V permit that the Southwire plant operations are part of the adjacent Century Aluminum of Kentucky (Source I.D. 21-091-00004) source operations (i.e., both sources are considered as a single source for purposes of Title V and PSD permitting programs). The Century plant is a primary aluminum reduction plant (i.e. one of 28 listed source categories) and, as such, the major stationary source threshold of 100 tons per year applies to Southwire.

(b) Southwire source operations alone (i.e., prior to consideration of Century) have the potential to emit SO_2, PM and PM_{10} at a rate greater than 100 tons per year. Therefore, this existing source is considered as a major stationary source under prevention of significant deterioration (PSD), 401 KAR 51:017.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.